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AFDSC

Semos and Midas

ARDC SAC ADC

1. Reference is made to paragraph 4 and 5 of secret letter, Exploitation of Initial Semos Data, AFDSC-AT, 1 June 1960.

2. In general, some of the questions raised by the Under Secretary and quoted in paragraph 4 of referenced letter cannot be finally answered until actual BMD test results are known. Further, this headquarters needs the benefit of ARDC's technical advice in order to arrive at tentative conclusions in some of the areas raised by the Under Secretary. Following paragraphs deal with the four questions in paragraph 4 of referenced letter in reverse order:

a. Reference paragraph 4 d. At this time this headquarters does not consider it absolutely essential that the data handling and photographic processing facilities be co-located with future control centers in all cases, if a recovery system is determined to be the most effective operational mode. However, co-location will be operationally necessary if the system is resolved to a readout mode and/or a combination of both. It should be pointed out that Air Force has a critical targeting requirement which requires the continuing improvement of data handling and processing facilities for the Strategic Air Command if that command is to continue to maximize its operational effectiveness. In the meantime, during the BMD phase, exploitation of the BMD take can logically be conducted at places other than the Sunnyvale control facility. BMD test results should enable us to arrive at a more definitive answer to the question of co-location of data processing, data handling and system operational control facilities. For discussion of integration of Semos and Midas control centers, see paragraph 3 below.

b. Reference paragraph 4 c. This headquarters recognizes that all plans for operational Semos systems have been based on the assumption that Semos will be essentially a passive system. Further this headquarters is aware of Sq Strategic Air Command's previous proposal that the system be hardened. This proposal was turned down, but in view of the Under Secretary's question, this point requires serious reconsideration. For the time being, the BMD effort and initial exploitation of BMD take will be considered peacetime operations and Semos will be conducted in soft facilities. The initial studies in reconsideration of the final "hard" vs "soft" configuration must be concerned with technical and budget considerations involved in hardening the minimum essential facilities for post strike operations.

SECRET

#60

request ADIC undertake such a study be considered.

(1) Is it possible to locate (or disperse) sufficient facilities to give the system a reasonable degree of survivability.

(2) If so what are the minimum essential facilities which must be hardened to allow operational exploitation of Soviet during and immediately after the first hours of general war? This question should be answered in two parts. Part one to be based on the assumption that primary operational dependence will be placed on manual systems and part two on the assumption that processible systems eventually become the major operational consideration.

(3) The dollar figure required by fiscal year to harden facilities required by each assumption above. Assume for this purpose that a go-ahead will be given in late CY 61.

Since it is recognized that many of the same personnel currently engaged in revising the development plan will be required to conduct this study, it will not be required until 1 September.

c. Reference questions a and b. The answer to question "a" is directly dependent upon the final position on question c. Since a restudy of the "operational vs "nuclear" vulnerability of the system pursuant use of the Berlin Radar Plant is question, the position of this headquarters is that a small crew of this facility should not be reactivated at this time for the interim operational exploitation equipment. The action directed by paragraph 3 a of the reference letter should consider all feasible methods of converting the SAD take into standard formats (9 inch photographic film and NLETT tapes) and providing duplicating services, bearing in mind that this is a photographic technical function demanding extremely high competence. The reactivation of a portion of the Berlin Radar Plant for this purpose will be authorized only if it can be shown that this is the most efficient and economical method of accomplishing these tasks. It is recognized that strategic air command exploitation of the SAD take, once it is reduced to standard formats, is a different function and involves other factors. SAC Strategic Air Command will conduct a study of the exploitation problem (as differentiated from the processing and duplication problem) which will include an estimate of reasonable SAD "take." This study will consider all communications exploitation facilities available to the command and total worldwide. The object of the study will be to determine the following:

(1) How long existing facilities will be adequate for exploitation of the SAD take.

(2) Time-phased requirements and justification for additional facilities, if any are required.

The guidance in paragraphs 3 a 1 through 10 of the subsequent letter will be used by ADC in submitting reasonable MID [illegible] in connection with the above study. The ADC study should be provided this headquarters by 1 August.

3. It must be recognized by all concerned that the above guidance, as well as that contained in the letter referenced in paragraph 1 above, has certain limitations in the Midas program. Because of the joint use of many facilities, integration of the operational control systems for the two weapons systems is essential. It is obvious that, at least for the next few years, most systems will be operated out of the Sunnyvale facility. When the final decision is made on the mixture and location of operational facilities, logic probably will favor designation of the control centers. However, the requirement for integrating the Midas display generating facility and the Samos data processing facility is not so clear. Since the Sunnyvale facility probably is not capable of handling the Midas display generating equipment, some other location must be found. The NORAD complex in Colorado, where the SAGE communication lines terminate, and where other warning functions are performed, appears to be a strong possibility. Request AMC and ADC provide their views on the feasibility and desirability of locating this facility in Colorado. ADC views should be provided when the revised development plan is submitted and AMC views within 10 days thereafter.

4. In addition to the comments specifically requested in the preceding paragraphs, all addressees are invited to comment on any of the ideas and policies discussed.